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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,590	10/11/2001	Dean Bernard Jacobs	BEAS-01077US2	8686

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FLIESLER MEYER, LLP
FOUR EMBARCADERO CENTER
SUITE 400
SAN FRANCISCO, CA 94111

EXAMINER

OSMAN, RAMY M

ART UNIT	PAPER NUMBER
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2157

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/975,590

Applicant(s)

JACOBS ET AL

Examiner

Ramy M. Osman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☒ Claim(s) 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. This communication is in response to amendment filed 5/23/2005. Claim 37 was amended. Claims 1-41 are pending.

Response to Amendment

2. Previous rejection under 35 USC 112 second paragraph is withdrawn.

Claim Objections

3. Claim 31 objected to because of the following informalities: in steps (b) and (c) respectively, change "to he" to "to be". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims rejected under 35 U.S.C. 102(b) as being anticipated by Gehani et al (US Patent No 5,765,171).**

6. In reference to claim 1, Gehani teaches a method for replicating data from a master server to a slave server over a network, the method comprising the steps of:

 sending a packet of information from the master server to the slave server, the information relating to a change in the data stored on the master server and containing a

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version number for the present state of the data (column 4 lines 40-60 and column 7 lines 40-60);

allowing the slave server to determine whether the data on the slave server has been updated to correspond to the version number contained in the packet (column 6 lines 15-40 and column 7 lines 40-67);

requesting a delta be sent from the master server to the slave server if the data on the slave server does not correspond to the version number contained in the packet, the delta containing information needed to update the slave server (Abstract, column 3 lines 35-45, column 4 lines 50-60 and column 8 lines 10-30).

7. In reference to claim 2, Gehani teaches a method according to claim 1, further comprising: storing an original copy of the data on the master server (column 3 lines 1-45, column 6 lines 25-55 and column 7 lines 40-50).

8. In reference to claim 3, Gehani teaches a method according to claim 1, further comprising: persistently caching the data on a local disk for each slave server (column 4 lines 25-67 and column 6 lines 25-55).

9. In reference to claim 4, Gehani method according to claim 1, further comprising: determining a unique version number for the current state of the data on the master server if the data has changed (column 6 lines 1-40).

10. As claim 5, Gehani teaches a method for replicating data from a master server to a slave server over a network, the method comprising the steps of:

sending a version number from the master server to the slave server, the version number relating to the present state of the data stored on the master server (column 4 lines 40-60 and column 7 lines 40-60);

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allowing the slave server to determine whether the slave server has been updated to reflect the present state of the data corresponding to the version number sent from the master server (column 6 lines 15-40 and column 7 lines 40-67); and

requesting a delta be sent from the master server to the slave server if the slave server does not correspond to the version number sent by the master, the delta containing information needed to update the slave server (Abstract, column 3 lines 35-45, column 4 lines 50-60 and column 8 lines 10-30).

11. In reference to claim 6, Gehani teaches a method according to claim 5, further comprising: sending the delta from the master server to the slave server (column 7 lines 40-67).

12. In reference to claim 7, Gehani a method according to claim 5, further comprising: committing the delta to the slave server (column 7 lines 40-67).

13. In reference to claim 8, Gehani teaches a method according to claim 5, further comprising: updating the version number of the slave server after committing the delta.(column 8 lines 12-67).

14. In reference to claim 9, Gehani teaches a method according to claim 5, further comprising: periodically sending the version number from the master server to a slave server (column 7 lines 1-20 & 40-60).

15. In reference to claim 10, Gehani teaches a method according to claim 5, further comprising: sending the version number to a slave server until the slave server acknowledges receipt of the version number (column 7 lines 1-23 & 40-60).

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16. In reference to claim 11, Gehani teaches a method according to claim 5, further comprising: including data with the version number that is necessary to update a slave server (column 7 line 40 – column 8 line 30).

17. In reference to claim 12, Gehani teaches a method according to claim 11, further comprising: committing the data necessary to update the slave server as soon as it is received (column 7 line 60 – column 8 line 40).

18. In reference to claim 13, Gehani teaches a method according to claim 5, further comprising: determining the scope of the delta before sending it from the master server (column 6 lines 1-50 and column 7 lines 1-60).

19. In reference to claims 14 and 38-41, Gehani teaches a method, computer readable medium, system and computer system respectively, for replicating data over a network including a master server and at least one slave server, the method comprising the steps of:

 sending a packet of information from a master server to each slave server on the network, the Information relating to a change in the data stored on the master server and containing a current version number for the present state of the data, the information further relating to previous changes in the data and a version number for each previous change (Summary, column 4 lines 40-60 and column 7 lines 40-60);

 allowing each slave server to determine whether the slave server has been updated to correspond to the current version number (column 6 lines 25-55 and column 7 lines 40-50);

 allowing each slave server to commit the information if the slave server has not missed a previous change (column 6 lines 25-55 and column 7 lines 40-50); and

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allowing each slave server having missed a previous change to request that previous change be sent from the master server to the slave server before the slave server commits the packet of information (column 6 lines 25-55 and column 7 lines 40-67).

20. In reference to claim 15, Gehani teaches a method according to claim 14, further comprising: committing the packet of information to a slave server (column 6 lines 25-55 and column 7 lines 40-50).

21. In reference to claim 16, Gehani teaches a method according to claim 14, further comprising: aborting the commit of the packet of information if a slave server cannot commit the update (column 6 lines 25-55 and column 7 lines 40-50).

22. In reference to claim 17, Gehani teaches a method according to claim 14, further comprising: determining the scope of the delta before sending it from the master server (column 6 lines 1-40).

23. In reference to claim 18, Gehani teaches a method according to claim 14, further comprising: including the scope of each the previous changes in the delta. (column 6 lines 25-67 and column 8 lines 10-67).

24. In reference to claim 19, Gehani teaches a method for replicating data over a network including a master server and at least one slave server, the method comprising the steps of:

 sending a packet of information from a master server to each slave server on the network, the information relating to a change in the data stored on the master server and containing a prior version number for the prior state and a new version number for the new state of the data, the information further relating to previous changes in the data and

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a previous version number for each previous change (Summary, column 4 lines 40-60 and column 7 lines 40-60);

allowing each slave server to determine whether the data on the slave server corresponds to the prior version number contained in the packet (column 6 lines 25-55 and column 7 lines 40-50)

allowing each slave server to commit the packet of information if the data on the slave server corresponds to the prior version number contained in the packet, the commit also updating the version of the slave server to the new version number (column 6 lines 25-55 and column 7 lines 40-50); and

allowing each slave server not corresponding to the prior version number to request that a delta be sent from the master server containing the information necessary to update the slave to the prior version number before the slave server commits the packet of information (column 6 lines 1-67 and column 7 lines 40-67).

25. In reference to claim 20, Gehani teaches method for replicating data over a network including a master server and at least one slave server, the method comprising the steps of:

sending a packet of information from a master server to each slave server on the network, the information relating to a change in the data stored on the master server and containing a version number for the prior state and a version number for the new state of the data, the information further relating to previous changes in the data and a version number for each previous change (Summary, column 4 lines 40-60 and column 7 lines 40-60);

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allowing each slave server to determine whether the data on the slave server corresponds to the prior version number contained in the packet (column 6 lines 25-55 and column 7 lines 40-50);

allowing each slave server to commit the packet of information if the data on the slave server corresponds to the prior version number contained in the packet, the commit also updating the version of the slave server to the new version number (column 6 lines 25-55 and column 7 lines 40-50);

allowing each slave server not corresponding to the prior version number to request that a delta be sent from the master server containing the information necessary to update the slave to the new version number (column 6 lines 1-67 and column 7 lines 40-67).

26. In reference to claim 21, Gehani teaches method for replicating data from a master server to at least one slave server over a network, the method comprising the steps of:

sending a packet of information from the master server to a slave server, the information relating to a change in the data stored on the master server and containing a version number for the present state of the data; receiving the packet of information to a slave server (Summary, column 4 lines 40-60 and column 7 lines 40-60);

allowing the slave server to determine whether the slave server has been updated to correspond to the version number contained in the packet, and to further determine whether the slave server can process the packet of information if needed to update to correspond to the version number contained in the packet (column 6 lines 25-55 and column 7 lines 40-50);

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sending a signal from the slave server to the master server, the signal indicating whether the slave server needs to be updated and whether the slave server can process the update (column 4 lines 30-67); and

sending a response signal from the master server to the slave server indicating whether the slave server should commit to the information contained in the packet (column 7 lines 30-67); and

committing the packet of information to the slave server if so indicated by the response signal (column 7 lines 30-67).

27. In reference to claims 22, Gehani teaches method according to claim 21, further comprising: determining whether each of the at least one slave server can commit the data (column 7 lines 5-67).

28. In reference to claim 23, Gehani teaches method according to claim 21, further comprising: determining whether each of the at least one slave server has sent a response back to the master server (column 7 lines 5-67 and column 8 lines 1-20).

29. In reference to claim 24, Gehani teaches method according to claim 21, further comprising: determining whether any of the at least one slave server can commit the data (column 7 lines 5-67).

30. In reference to claim 25, Gehani teaches method according to claim 21, further comprising: committing the data only if each of the at least one slave server can process the commit (column 7 lines 5-67).

31. In reference to claim 26, Gehani teaches method according to claim 21, further comprising: aborting the data only if any of the at least one slave server cannot process the commit (column 7 lines 5-67).

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32. In reference to claim 27, Gehani teaches method according to claim 21, further comprising: committing the data to those slaves that are able to process the commit (column 7 lines 5-67).

33. In reference to claim 28, method according to claim 21, further comprising: multicasting the update to any of the at least one slave server that were not able to process the commit (column 7 lines 5-67).

34. In reference to claim 29, Gehani teaches method according to claim 21, further comprising: heart beating the new version number to any of the at least one slave server that were not able to process the commit (column 7 lines 5-67).

35. In reference to claim 30, Gehani teaches method according to claim 21, further comprising: requesting a delta be sent to a slave server that was not able to process the commit (column 7 lines 5-67).

36. In reference to claims 31-37, Gehani teaches a method, a computer readable medium, a computer program product, and a system respectively, for replicating data over a network, the method comprising the steps of:

(a) determining whether the replication should be accomplished in a one or two phase method (Summary);

(b) sending replication information determined to be accomplished in a one phase method by:

 sending a packet of information from the master server to the slave server, the information relating to a change in the data stored on the master server and containing a version number for the present state of the data; receiving the packet of information to a slave server (column 4 lines 40-60 and column 7 lines 40-60);

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allowing the slave server to determine whether the data on the slave server has been updated to correspond to the version number (column 6 lines 15-40 and column 7 lines 40-67); and

requesting a delta be sent from the master server to the slave server if the slave server does not correspond to the version number, the delta containing information needed to update the slave server (Abstract, column 3 lines 35-45, column 4 lines 50-60 and column 8 lines 10-30);

(c) sending replication information determined to be accomplished in a two phase method by:

sending a packet of information from the master server to the slave server, the information relating to a change in the data stored on the master server and containing a version number for the present state of the data (Summary, column 4 lines 40-60 and column 7 lines 40-60);

allowing the slave server to determine whether the slave server has been updated to correspond to the version number, and to further determine whether the slave server can process the packet of information (column 6 lines 25-55 and column 7 lines 40-50);

sending a signal from the slave server to the master server indicating whether the slave server needs to be updated and whether the slave server can process the packet of information (column 4 lines 30-67);

sending a response signal from the master server to the slave server indicating whether the slave server should commit to the packet of information;

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and committing the packet of information to the slave server if so indicated by the response signal (column 7 lines 30-67).

Response to Arguments

37. Applicant's arguments with respect to claims 1-41 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramy M. Osman whose telephone number is (571) 272-4008. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RMO
August 3, 2005


ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER